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Sang-hak Lee

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EXAMINER

ADEGEYE, OLUWASEUN

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,404	Applicant(s) LEE, SANG-HAK	
	Examiner OLUWASEUN A. ADEGEYE	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/25/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 149 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 149 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/25/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 20, 41, 49, 64 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed 03/10/2009 with respect to claims 13 and 30 have been fully considered but they are not persuasive

In re pages 32 – 35, applicants disclose that the Miyatake reference does not disclose a virtual file system. In response, the examiner respectfully disagrees. The examiner understands a virtual file system to be a system for managing the digital video and audio data. Miyatake clearly discloses thumbnails and management information used for managing the digital video and audio data (see [040] and [041]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 4, 20, 41, 45 - 49, 64, 80 - 88 and 100 - 106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al (US 6,580,462 B2) in view Well known Knowledge in the art .

As to **claim 1**, Inoue discloses a display apparatus (14) connected with an external storage medium (45) disposed external to the display apparatus, the apparatus comprising (see fig. 1):

a receiving processor (32) that receives a television broadcasting signal (see column 5, lines 1 – 13) and at least a digital video signal and/or an audio signal from the external storage medium (see column 2, lines 32 – 38)

a controller (30) (see column 5, lines 14 – 25) that, if a user commands storage of the received digital video signal and audio signal, stores the received digital video signal and audio signal in the external storage medium (see column 8, lines 25 – 60) and

a display unit (44) to display the received digital video signal (see fig. 1)

a speaker to output the received audio signal (see column 8, lines 13 – 19)

a port disposed on the display apparatus, through which the received digital video signal and audio signal are transmitted from the display apparatus to the external storage medium (see fig. 1)

wherein the controller is connected to the external storage through the port (see fig. 1 and column 8, lines 37 – 44).

As to **claim 20**, Inoue discloses a display apparatus connected with an external storage medium, the apparatus comprising

a receiving processor (30) that receives a digital video signal and an audio signal (see column 8, lines 45 – 60)

a compression (see column 7, lines 61 – 67) and decompression (14) unit that if a user requests storing of the received digital video signal and/or audio signal, is set to a compression mode, and compresses the digital video signal and/or the audio signal received from the receiving processor (see column 7, lines 61 – 67), and

if the user requests reproduction of the digital video signal and/or audio signal stored in the external storage medium, is set to a decompression mode, and restores the digital video signal and/or the audio signal received from an external storage medium; an output unit to output the reproduced digital video signal and/or audio signal (see column 11, line 14 – column 12, line 55); and

a controller (30) that

if the user requests the storage, controls the compression and decompression unit in the compression mode and stores the compressed digital video signal and/or audio signal compressed by the compression and decompression unit in the external storage medium in real time (see column 9, lines 1 – 24), and

if the user requests the reproduction, outputs the digital video signal and/or audio signal from the external storage medium to the output unit through the compression and decompression unit (see column 11, line 14 – column 12, line 55)

As to **claim 41**, this is a method claim corresponding to the apparatus claim 20. Therefore, claim 41 is analyzed and rejected as previously discussed with respect to claim 20.

As to **claim 49**, this is similar to claim 1 only in that the limitation "an output unit that outputs the digital video signal and the television broadcasting signal" is additionally recited.

Inoue clearly discloses an output unit (44) that outputs the digital video signal and the television broadcasting signal (see fig. 1).

As to **claim 100**, grounds for rejecting claim 1 apply to claim 100 in its entirety.

As to **claim 2**, Inoue discloses the display apparatus of claim 1. However Inoue does not disclose wherein the controller, according to a request from the user and when the received digital video signal and/or audio signal are stored in the external storage medium, determines whether the received digital video signal and/or audio signal is to be output through the port.

Official notice is taken that the controller is in charge of making the determination whether to move the digital video and audio from the external storage device to the display unit or vice versa via the port.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the controller to make the determination of whether the received digital video signal and audio signal is to be output through the port.

As to **claim 81**, Inoue discloses the display apparatus of claim 1, wherein the received digital video and/or audio signal are stored in the external storage medium in a real time manner (see column 8, lines 26 – 42, column 5, lines 41 – 51 and column 12, lines 37 - 43).

As to **claim 83**, Inoue discloses the display apparatus of claim 3. Inoue discloses another external memory (100). However he does not disclose wherein the external storage medium is incorporated in a PDA.

Official notice is taken that the external storage medium is incorporated in a PDA.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated an external storage device in another device.

As to **claims 84 and 85** grounds for rejecting claim 83 apply to claims 84 and 85 in its entirety.

5. Claims 13 – 18, 30 – 37, 39 – 40, 50 – 56, 59 – 63, 65 - 70, 73 – 77 and 89 - 91 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyatake et al (US 2003/0192058 A1).

As to **claim 13**, Miyatake discloses a display apparatus capable of being connected to an external storage medium, the apparatus comprising (see fig. 1 and [032]):

a receiving processor to receive a digital video signal and/or an audio signal(see [32]);

a controller (fig. 6, 60) that forms a virtual file system for the external storage medium (see [40] and [41]),

if a user requests storage of the received digital video signal and/or audio signal, stores the digital video signal and/or audio signal received through the receiving processor in the external storage medium in real time with reference to information generated on the basis of the formed virtual file system (see [32], [40], [41], [43] and [56]), and

if the user requests reproduction of the digital video signal and/or audio signal stored on the external storage medium, reproduces the stored digital video signal and/or an audio signal from the external storage medium with reference to the information generated on the basis of the virtual file system (see [40] and [41]); and

an output unit (fig. 1, 1), to output the reproduced digital video signal and/or audio signal (see [32 and [40]).

As to **claim 30**, this is a method claim corresponding to the apparatus claim 13. Therefore, claim 30 is analyzed and rejected as previously discussed with respect to claim 13.

As to **claim 14**, Miyatake discloses the display apparatus of claim 13, wherein the controller downloads a file system stored in the external storage medium and uses the downloaded file system to form the virtual file system (see [40] and [58]. The downloaded file is the list of representative images).

As to **claim 15**, Miyatake discloses the display apparatus of claim 13, wherein the controller controls the storage or the reproduction to output the digital video signal and/or audio signal received through the receiving processor to the output unit in real time (see [32], [40], [43] and [56]).

As to **claim 16**, Miyatake discloses the display apparatus of claim 13, wherein the information generated on the basis of the virtual file system comprises management information for the external storage medium (see [40] – [43]).

As to **claim 17**, Miyatake discloses the display apparatus of claim 16, wherein the management information comprises time information corresponding to a storage capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or the audio signal and additional digital video and/or audio signals stored in the external storage medium (see [40]).

As to **claim 18**, Miyatake discloses the display apparatus of claim 17, wherein the controller generates the management information so that the management information is output in an on-screen display format through the output port (see [40] and [41]).

As to **claim 32**, Miyatake discloses the method of claim 31, wherein the forming the virtual file system is performed if an input of the user requests control of the external storage medium by the display apparatus (see [40] - [43]).

As to **claim 35**, this is a method claim corresponding to the apparatus claim 11. Therefore, claim 35 is analyzed and rejected as previously discussed with respect to claim 11.

As to **claim 37**, this is a method claim corresponding to the apparatus claim 4. Therefore, claim 37 is analyzed and rejected as previously discussed with respect to claim 4.

As to **claim 39**, Miyatake discloses the method of claim 30, wherein, according to a request from the user and when the received digital video signal and/or the audio signal are stored, it is determined whether the received digital video signal and/or audio signal are to be output through the display unit (see [40]).

As to **claim 40**, Miyatake discloses the method of claim 30, wherein the providing the generated management information comprising providing information required by the user for use by the user in controlling the external storage medium (see [40] – [43]).

As to **claim 50**, Miyatake discloses the reproducing apparatus of claim 49, wherein the controller further retrieves the stored signal from the external storage

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medium and controls the output unit to output the retrieved signal (see [32], [40] and [43]).

As to **claim 51**, Miyatake discloses the reproducing apparatus of claim 49, wherein the controller further stores the received signal in the external storage medium as the signal is received so as to record the signal in real time (see [56]).

As to **claim 52**, Miyatake discloses the reproducing apparatus of claim 51, wherein the controller further outputs the received signal through the output unit in real time as the received signal is being stored (see [54], [56] and [58]).

As to **claim 53**, Miyatake discloses the reproducing apparatus of claim 51, wherein the controller further retrieves the stored signal from the external storage medium and controls the output unit to output the retrieved signal (see [40] – 43]).

As to **claim 54**, Miyatake discloses the reproducing apparatus of claim 53, wherein the controller further outputs the received signal through the output unit in real time such that the received signal is output with the retrieved signal (see [43], [55] and [56]). As to claim grounds for rejecting claim apply to claim in its entirety.

As to **claims 55 and 56** grounds for rejecting claim 1 apply to claims 55 and 56 in its entirety.

As to **claim 91**, Miyatake discloses the method of claim 30, wherein the digital video signal and/or the audio signal are received from an external audio/video (AV) device (see fig. 1 and [32]).

As to **claim 99**, grounds for rejecting claim 83 apply to claim 99 in its entirety.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Kovacevic (US 7,030,930 B2).

As to **claim 19**, Inoue discloses the display apparatus of claim 4, wherein, when the digital video signal and/or audio signal are reproduced from the external storage medium, the controller displays the reproduced digital video signal and the received digital video signal together using the output unit (see column 11, line 14 – column 12, line 55).

Inoue does not disclose the output unit in a Picture-In-Picture format or in a Picture-By-Picture format.

Kovacevic discloses the output unit in a Picture-In-Picture format or in a Picture-By-Picture format (see column 6, lines 14 – 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added outputting picture-in-picture as taught by Kovacevic to the apparatus of Miyatake to provide a system for synchronizing the output of decoded audio data to the presentation of decoded digital video data (see column 2, lines 1 – 3).

8. Claims 6 – 12, 21 – 27, 29, 42 – 44, 79 and 110 – 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Miyatake.

As to **claim 6**, Inoue discloses the display apparatus of claim 1. However Inoue does not disclose wherein if an input of the user requests control of the external storage medium, the controller outputs management information through the port, and uses the management information to manage the storage or reproduction of the received digital video signal and/or audio signal with respect to the external storage medium.

Miyatake discloses wherein if an input of the user requests control of the external storage medium, the controller outputs management information through the output unit, and uses the management information to manage the storage or reproduction of the received digital video signal and/or audio signal with respect to the external storage (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of forming a virtual file system for the external storage medium as taught by Miyatake to the apparatus of Inoue to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 8**, Miyatake discloses the display apparatus of claim 6, wherein the management information for the digital video signal and the audio signal stored in the external storage medium is displayed in an on-screen display format on the display unit (see [40] – [43]).

As to **claim 9**, Miyatake discloses the display apparatus of claim 6, wherein the management information for the digital video signal and the audio signal stored in the external storage medium is output as an audio signal through the speaker (see [40]).

As to **claim 10**, Miyatake discloses the display apparatus of claim 6, wherein the management information comprises time information corresponding to a storage capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or audio signal and additional digital video signals and/or audio signals stored in the external storage medium (see [40]).

As to **claim 11**, Miyatake discloses the display apparatus of claim 6, wherein the reproduced digital video signal and/or the audio signal are a digital video signal and an audio signal selected from a plurality of reproducible digital video signals and audio signals stored in the external storage medium and which is selected by a user with reference to the management information (see [40] – [43]).

As to **claim 21**, Inoue discloses the display apparatus of claim 20 but does not disclose wherein the controller forms a virtual file system for the external storage medium, and controls the storage or reproduction of the digital video and audio signals with respect to the external storage medium using the virtual file system.

Miyatake discloses wherein the controller forms a virtual file system for the external storage medium, and controls the storage or reproduction of the digital video and/or audio signals with respect to the external storage medium using the virtual file system (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of forming a virtual file system for the external storage medium as taught by Miyatake to the apparatus of Inoue to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 22**, Miyatake discloses the display apparatus of claim 21, wherein the controller downloads a file system stored in the external storage medium and forms the virtual file system using the downloaded file system (see [40] – [43]).

As to **claim 23**, Miyatake discloses the display apparatus of claim 21, wherein the controller forms the virtual file system if an input of the user requests control of the external storage medium (see [40] – [43]).

As to **claim 24**, Inoue discloses the display apparatus of claim 20 but does not disclose wherein the controller generates management information for managing the stored digital video signal and/or the audio signal in the external storage medium using the virtual file system, and outputs the management information to the output unit. Miyatake discloses wherein the controller generates management information for managing the stored digital video signal and/or the audio signal on the external storage medium using the virtual file system, and outputs the management information to the output unit (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of making the controller generate management information for managing the stored digital video signal on the external

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storage medium as taught by Miyatake to the apparatus of Inoue to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 25**, Miyatake discloses the display apparatus of claim 24, wherein the controller generates the management information so that the management information is displayed in an on-screen display format on the output unit (see [40] – [43]).

As to **claim 26**, Miyatake discloses the display apparatus of claim 24, wherein the management information comprises time information corresponding to a storage capacity of the external storage medium (see [41]), and a list including the stored digital video signal and/or audio signal and additional digital video and/or audio signals stored in the external storage medium (see [40] and [43]).

As to **claim 27**, Inoue discloses the display apparatus of claim 20 but does not disclose wherein, when the received digital video signal and audio signal are output through the output unit in real time, the controller controls the storage or reproduction of the received digital video signal and/or the audio signal with respect to the external storage medium. Miyatake discloses wherein, when the received digital video signal and audio signal are output through the output unit in real time, the controller controls the storage or reproduction of the received digital video signal and/or the audio signal with respect to the external storage medium (see [40] – [43] and [56]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of outputting the received digital video

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signal through the output unit in real time as taught by Miyatake to the apparatus of Inoue to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 29**, Inoue discloses the display apparatus of claim 20 but does not disclose wherein, according to a request of the user and when the received digital video signal and/or audio signal are stored in the external storage medium, the controller determines whether the received digital video signal and/or audio signal is to be output using the output unit. Miyatake discloses wherein, according to a request of the user and when the received digital video signal and/or audio signal are stored on the external storage medium, the controller determines whether the received digital video signal and/or audio signal is to be output using the output unit (see [40] – [43]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the step of making a user request receiving a digital video and/or audio signal stored on an external storage medium as taught by Miyatake to the apparatus of Inoue to provide a real – time processing work station and an inexpensive digital video retrieval apparatus (see [18]).

As to **claim 42**, Miyatake discloses the method of claim 41, further comprising:
forming a virtual file system for the external storage medium (see [40] – [41]);
and outputting management information for the external storage medium generated on the basis of the virtual file system, before the compression or the restoration is performed (see [40] – [43]).

As to **claim 43**, Miyatake discloses the method of claim 42, wherein the storing or the restoring the compressed digital video and/or audio signal comprises the user requiring the storage or the reproduction of the compressed digital video and/or audio signal with reference to the output management information (see [40] – [43]).

As to **claim 44**, Miyatake discloses the method of claim 42, wherein the forming the virtual file system is performed if an input of the user requests control of the external storage medium (see [40] – [43]).

As to **claims 110 – 149**, grounds for rejecting claims 1, 6, 8, 9, 10 apply to claims 110 - 149 in its entirety.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Miyatake as applied to claim 27 above, and further in view of Kovacevic.

As to **claim 28**, grounds for rejecting claim 5 apply to claim 28 in its entirety.

10. Claims 57, 58, 71, 72, 78 and 92 - 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyatake in view of Inoue.

As to **claims 57 and 58**, grounds for rejecting claim 83 apply to claims 57 and 58 in its entirety.

As to **claim 78**, Inoue discloses a computer readable medium encoded with processing instructions for implementing a method of claim 30 performed by a processor (see column 19, lines 33 – 40).

As to **claims 92 – 98**, grounds for rejecting claims 82 – 88 respectively apply to claims 92 - 98 in its entirety.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **OLUWASEUN A. ADEGEYE** whose telephone number is (571)270-1711. The examiner can normally be reached on Monday - Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

06/05/2009

/Marsha D. Banks-Harold/

Supervisory Patent Examiner, Art Unit 2621

/O.A/